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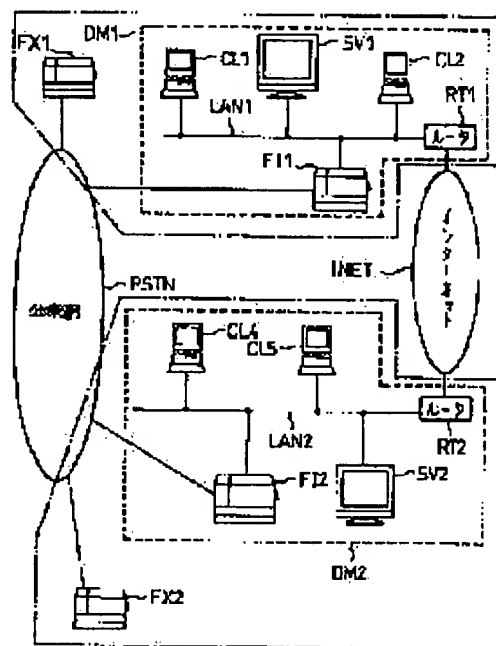
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(54) CONTROL METHOD FOR NETWORK FACSIMILE EQUIPMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To evade the relay transmission request of an unauthorized user by taking out relay destination information for specifying a relay destination number included there in the electronic mail reception of the relay transmission request, applying a cipher decoding processing by prescribed key data to it and transmitting image information to a relay destination.

SOLUTION: An electronic mail from a domain DM1 to the domain DM2 is temporarily stored in a mail server terminal SV1 and transmitted and stored in the mail server terminal SV2 of the opposite side domain DM2 through a router RT1 and the internet INET. Then, network facsimile equipments F11 and F12 which receive the electronic mail apply a prescribed cipher decoding processing for the Subject field of header information, form an original telephone number and the name of the relay destination, relay and transfer the text image information of the electronic mail to the formed telephone number when the decoding processing is ended and do not perform relay transmission when the decoding processing can not be appropriately ended.



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CLAIMS

[Claim(s)]

[Claim 1] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If the electronic mail of a junction transmitting request is received, the junction destination information that the junction destination number contained in the electronic mail is specified will be taken out. The control approach of the network facsimile apparatus characterized by forming the original junction destination number with the application of the code decode processing using predetermined key data, carrying out call origination to the formed junction destination number, and transmitting the drawing information on the received electronic mail to the junction destination information.

[Claim 2] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize predetermined private key data and the electronic mail of a junction transmitting request is received The junction destination information that the junction destination number contained in the electronic mail is specified is taken out. With the application of the code decode processing using the private key data memorized for the above-mentioned storage means, the original junction destination number is formed to the junction destination information. The control approach of the network facsimile apparatus characterized by carrying out call origination to the formed junction destination number, and transmitting the drawing information on the received electronic mail to it.

[Claim 3] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it The control approach of the network facsimile apparatus characterized by not performing a junction send action when the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means.

[Claim 4] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data

based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system The control approach of the network facsimile apparatus characterized by transmitting the predetermined report electronic mail which notifies having received the unjust junction transmitting request to the manager who does not perform a junction send action but is registered beforehand.

[Claim 5] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system The control approach of the network facsimile apparatus characterized by transmitting the predetermined report drawing information which notifies having received the unjust junction transmitting request with a facsimile transmission protocol to the manager who does not perform a junction send action but is registered beforehand.

[Claim 6] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code

decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system The control approach of the network facsimile apparatus characterized by carrying out the record output of the predetermined report image which notifies having not performed a junction send action but having received the unjust junction transmitting request.

[Claim 7] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, Or the control approach of the network facsimile apparatus characterized by memorizing the hysteresis information showing having not performed a junction send action but having received the unjust junction transmitting request when the above-mentioned junction destination number formed by the above-mentioned code decode processing did not agree for a predetermined telephone number system.

[Claim 8] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it The control approach of the network facsimile apparatus characterized by not performing a junction send action when the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means.

[Claim 9] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it

has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system The control approach of the network facsimile apparatus characterized by transmitting the predetermined report electronic mail which notifies having received the unjust junction transmitting request to the manager who does not perform a junction send action but is registered beforehand.

[Claim 10] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system The control approach of the network facsimile apparatus characterized by transmitting the predetermined report drawing information which notifies having received the unjust junction transmitting request with a facsimile transmission protocol to the manager who does not perform a junction send action but is registered beforehand.

[Claim 11] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction

destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system The control approach of the network facsimile apparatus characterized by carrying out the record output of the predetermined report image which notifies having not performed a junction send action but having received the unjust junction transmitting request.

[Claim 12] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, Or the control approach of the network facsimile apparatus characterized by memorizing the hysteresis information showing having not performed a junction send action but having received the unjust junction transmitting request when the above-mentioned junction destination number formed by the above-mentioned code decode processing did not agree for a predetermined telephone number system.

[Claim 13] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a public key data storage means to memorize the public key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the

above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but registering the network address of the transmitting agency user of the electronic mail into the above-mentioned unlawful access table The electronic mail which notifies the purport the network address of whose is an inaccurate user network address It transmits to all the network addresses memorized by the above-mentioned network address storage means. The control approach of the network facsimile apparatus characterized by registering the above-mentioned inaccurate user network address notified with the received electronic mail into the above-mentioned inaccurate user table.

[Claim 14] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a private key data storage means to memorize the private key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but registering the network address of the transmitting agency user of the electronic mail into the above-mentioned unlawful access table The electronic mail which notifies the purport the network address of whose is an inaccurate user network address It transmits to all the network addresses memorized by the above-mentioned network address storage means. The control approach of the network facsimile apparatus characterized by registering the above-mentioned inaccurate user network address notified with the received electronic mail into the above-mentioned inaccurate user table.

[Claim 15] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a public key data storage means to memorize the public key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and count of unlawful access and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information.

While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but updating the above-mentioned unlawful access table based on the network address of the transmitting agency user of the electronic mail The electronic mail which notifies the purport the network address of whose is an inaccurate user network address Transmit to all the network addresses memorized by the above-mentioned network address storage means, and by the above-mentioned inaccurate user network address notified with the received electronic mail While updating the above-mentioned inaccurate user table, the network address of the transmitting agency user of the received electronic mail The control approach of the network facsimile apparatus characterized by registering with the above-mentioned inaccurate user table, and discarding an electronic mail when the count of unlawful access is beyond a predetermined value.

[Claim 16] The function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a private key data storage means to memorize the private key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but updating the above-mentioned unlawful access table based on the network address of the transmitting agency user of the electronic mail The electronic mail which notifies the purport the network address of whose is an inaccurate user network address Transmit to all the network addresses memorized by the above-mentioned network address storage means, and by the above-mentioned inaccurate user network address notified with the received electronic mail While updating the above-mentioned inaccurate user table, the network address of the transmitting agency user of the received electronic mail The control approach of the network facsimile apparatus characterized by registering with the above-mentioned inaccurate user table, and discarding an electronic mail when the count of unlawful access is beyond a predetermined value.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the control approach of network facsimile apparatus equipped with the function to exchange an electronic mail through a Local Area Network or the Internet, and the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange.

[0002]

[Description of the Prior Art] In recent years, network facsimile apparatus equipped with the function to exchange an electronic mail through a Local Area Network or the Internet, and the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange is used with the spread of the Internet.

[0003] Moreover, the electronic mail of a junction transmitting request is received through a Local Area Network or the Internet as a function of this network facsimile apparatus, in the case of the facsimile apparatus by which the junction destination specified with that electronic mail was connected to the public network, call origination can be carried out to that facsimile apparatus with a public network, and the junction transmitting function which transmits the drawing information received by E-mail to that destination can be realized.

[0004] if such a junction transmitting function is used, since a communication link tariff can be boiled markedly and can be reduced compared with the case where it transmits directly using a public network to the facsimile apparatus of a remote place, sharp reduction of communication link cost can be realized.

[0005]

[Problem(s) to be Solved by the Invention] however, in the conventional network facsimile apparatus If the electronic mail of junction request transmission of a predetermined format is received, since a junction send action will be performed to the specified destination For example, even when the electronic mail of junction request transmission is received from other users who do not constitute the same network, junction request transmission from this inaccurate user is performed, and there is a possibility of producing the situation where a communication link tariff will be paid unfairly.

[0006] This invention is made in view of this actual condition, and aims at offering the control approach of network facsimile apparatus that it can avoid performing junction transmission of the junction transmitting request from an inaccurate user.

[0007]

[Means for Solving the Problem] The function in which this invention exchanges an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If the electronic mail of a junction transmitting request is received, the junction destination information that the junction destination number contained in the electronic mail is specified will be taken out. To the junction destination information, the original

junction destination number is formed with the application of the code decode processing using predetermined key data, call origination is carried out to the formed junction destination number, and the drawing information on the received electronic mail is transmitted to it.

[0008] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize predetermined private key data and the electronic mail of a junction transmitting request is received The junction destination information that the junction destination number contained in the electronic mail is specified is taken out. With the application of the code decode processing using the private key data memorized for the above-mentioned storage means, the original junction destination number is formed to the junction destination information, call origination is carried out to the formed junction destination number, and the drawing information on the received electronic mail is transmitted to it.

[0009] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it, when the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, it is made not to perform a junction send action.

[0010] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system A junction send action is not performed but the predetermined report electronic mail which notifies having received the unjust junction transmitting request is transmitted to the manager registered beforehand.

[0011] Moreover, the function to exchange an electronic mail through a Local Area Network or the

Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system A junction send action is not performed but the predetermined report drawing information which notifies having received the unjust junction transmitting request is transmitted with a facsimile transmission protocol to the manager registered beforehand.

[0012] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, Or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system, a junction send action is not performed but it is made to carry out a record output in the predetermined report image which notifies having received the unjust junction transmitting request.

[0013] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the private key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With

the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, Or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system, a junction send action is not performed but the hysteresis information showing having received the unjust junction transmitting request is memorized.

[0014] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it, when the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, it is made not to perform a junction send action.

[0015] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system A junction send action is not performed but the predetermined report electronic mail which notifies having received the unjust junction transmitting request is transmitted to the manager registered beforehand.

[0016] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to

network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system A junction send action is not performed but the predetermined report drawing information which notifies having received the unjust junction transmitting request is transmitted with a facsimile transmission protocol to the manager registered beforehand.

[0017] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, Or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system, a junction send action is not performed but it is made to carry out a record output in the predetermined report image which notifies having received the unjust junction transmitting request.

[0018] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange If it has a storage means to memorize the public key data of each user corresponding to network address and network address of the user in whom a junction transmitting request is possible and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the

drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, Or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system, a junction send action is not performed but the hysteresis information showing having received the unjust junction transmitting request is memorized.

[0019] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a public key data storage means to memorize the public key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but registering the network address of the transmitting agency user of the electronic mail into the above-mentioned unlawful access table The electronic mail which notifies the purport the network address of whose is an inaccurate user network address It transmits to all the network addresses memorized by the above-mentioned network address storage means, and the above-mentioned inaccurate user network address notified with the received electronic mail is registered into the above-mentioned inaccurate user table.

[0020] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a private key data storage means to memorize the private key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting

agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but registering the network address of the transmitting agency user of the electronic mail into the above-mentioned unlawful access table The electronic mail which notifies the purport the network address of whose is an inaccurate user network address It transmits to all the network addresses memorized by the above-mentioned network address storage means, and the above-mentioned inaccurate user network address notified with the received electronic mail is registered into the above-mentioned inaccurate user table. [0021] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a public key data storage means to memorize the public key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and count of unlawful access and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the public key data memorized by the above-mentioned storage means corresponding to the network address The junction destination information that the junction destination number contained in the received electronic mail is specified Ejection, With the application of the code decode processing using the public key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system While not performing a junction send action but updating the above-mentioned unlawful access table based on the network address of the transmitting agency user of the electronic mail The electronic mail which notifies the purport the network address of whose is an inaccurate user network address Transmit to all the network addresses memorized by the above-mentioned network address storage means, and by the above-mentioned inaccurate user network address notified with the received electronic mail While updating the above-mentioned inaccurate user table, the network address of the transmitting agency user of the received electronic mail is registered into the above-mentioned inaccurate user table, and an electronic mail is discarded when the count of unlawful access is beyond a predetermined value.

[0022] Moreover, the function to exchange an electronic mail through a Local Area Network or the Internet, In the control approach of network facsimile apparatus equipped with the function of the facsimile data based on the facsimile transmission protocol performed through a public network of an exchange The network address of the user in whom a junction transmitting request is possible, and a private key data storage means to memorize the private key data of each user corresponding to the network address, A network address storage means by which one or more network addresses of other network facsimile apparatus were memorized, If it has an unlawful access table storage means to memorize the unlawful access table which registers an inaccurate user's network address and the electronic mail of a junction transmitting request is received When the network address of the transmitting agency user of the electronic mail is taken out and the network address is registered into the above-mentioned storage means While taking out the private key data memorized by the above-

mentioned storage means corresponding to the network address. The junction destination information that the junction destination number contained in the received electronic mail is specified. Ejection, With the application of the code decode processing using the private key data taken [above-mentioned] out picking, the original junction destination number is formed to the junction destination information. While carrying out call origination to the formed junction destination number and transmitting the drawing information on the received electronic mail to it. When the network address of the transmitting agency user of the received electronic mail is not registered into the above-mentioned storage means, Or when the above-mentioned junction destination number is not able to be formed without completing the above-mentioned code decode processing appropriately, or when the above-mentioned junction destination number formed by the above-mentioned code decode processing does not agree for a predetermined telephone number system. While not performing a junction send action but updating the above-mentioned unlawful access table based on the network address of the transmitting agency user of the electronic mail. The electronic mail which notifies the purport the network address of whose is an inaccurate user network address. Transmit to all the network addresses memorized by the above-mentioned network address storage means, and by the above-mentioned inaccurate user network address notified with the received electronic mail. While updating the above-mentioned inaccurate user table, the network address of the transmitting agency user of the received electronic mail is registered into the above-mentioned inaccurate user table, and an electronic mail is discarded when the count of unlawful access is beyond a predetermined value.

[0023]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail, referring to an accompanying drawing.

[0024] Drawing 1 shows the communication system concerning one example of this invention. In addition, in this invention, since an electronic mail is mainly taken up as application using the Internet, in the following explanation, it is omitting about applications other than an electronic mail.

[0025] This communication system mainly consists of a domain DM 1 centering on Local Area Network LAN 1, and a domain DM 2 centering on Local Area Network LAN 2. Moreover, it is installed in the installation area (for example, Japan) of Local Area Network LAN 1, and is group 3 facsimile apparatus using a public network PSTN as a transmission line, and facsimile apparatus FX2 is installed in the installation area (for example, U.S.) of Local Area Network LAN 2, and facsimile apparatus FX1 is group 3 facsimile apparatus using a public network PSTN as a transmission line.

[0026] Moreover, the leased connection of each domain DM1 and DM2 is carried out to the service provider (network provider; graphic display abbreviation) of Internet INET through routers RT1 and RT2.

[0027] Here, the network address of the proper which divided assignment into the carrier beam network address with the application of the net mask of a predetermined value is set to domains DM1 and DM2, and, thereby, data transmission which minded routers RT1 and RT2 and Internet INET between domains DM1 and DM2 can be performed.

[0028] Moreover, the mail server terminal SV 1 for providing with electronic mail service the client terminals CL1 and CL2 and the network facsimile apparatus FI1 which are connected to Local Area Network LAN 1 is formed in the domain DM 1. Moreover, for example, the host address of the proper which comes to connect the address of a proper is set as the network address of a domain DM 1 by each client terminals CL1 and CL2, the network facsimile apparatus FI1, and the mail server terminal SV 1, respectively, and the user address with which the user who uses this domain DM 1 comes to connect the host address of one of the client terminals CL1 and CL2 with the user name of a proper is set to them.

[0029] Similarly, the mail server terminal SV 2 for providing with electronic mail service the client terminals CL3 and CL4 and the network facsimile apparatus FI2 which are connected to Local Area Network LAN 2 is formed in the domain DM 2. Moreover, for example, the host address of the proper which comes to connect the address of a proper is set as the network address of a domain DM 2 by each client terminals CL3 and CL4, the network facsimile apparatus FI2, and the mail server terminal SV 2, respectively, and the user address with which the user who uses this domain DM 2 comes to connect the

host address of one of the client terminals CL3 and CL4 with the user name of a proper is set to them. [0030] Moreover, it connected with Local Area Networks LAN1 and LAN2, and it connected with the public network PSTN with the transmission function for exchanging drawing information as an electronic mail, and the network facsimile apparatus FI1 and FI2 are equipped with the transmission function to perform the drawing information transmission by the group 3 facsimile transmission protocol, using this public network PSTN as a transmission line.

[0031] Moreover, fundamentally, an exchange of the data between [which is connected to Local Area Networks LAN1 and LAN2] terminals and the exchange of data performed through Internet INET are performed by the combination (the so-called protocol suite) of the transmission protocol to the transport layer called the so-called TCP/IP and the communications protocol of the high order layer beyond it applying. For example, in an exchange of the data of an electronic mail, a communications protocol called SMTP (Simple Mail Transfer Protocol) is applied as a communications protocol of a high order layer.

[0032] Moreover, at this example, once an electronic mail is accumulated in the mail server terminals SV1 and SV2, it is transmitted with the transmission gestalt of the are recording distribution mold distributed to the destination. When the value of the destination address (after-mentioned) given to the electronic mail includes the network address set as each domain DM1 and DM2 at this time The electronic mail is accumulated in the corresponding mail server terminals SV1 and SV2 as it is. moreover, when the value of the destination address given to the electronic mail includes values other than the network address set as each domain DM1 and DM2 Through routers RT1 and RT2, the electronic mail is sent out to Internet INET, and is transmitted to a proper domain or a proper host etc. who has a network address corresponding to the value of the destination address by the data transfer function of Internet INET.

[0033] The electronic mail which it followed, for example, the electronic mail from each user to each user of a domain DM 2 of a domain DM 1 was once accumulated in the mail server terminal SV 1, and was accumulated in this mail server terminal SV 1 is sent out to Internet INET through a router RT 1, and is transmitted and accumulated in the mail server terminal SV 2 of the domain DM 2 of the other party through Internet INET.

[0034] On the other hand, when electronic mail reception of addressing to a user in the end of a local is asked and the electronic mail addressed to a user is accumulated in the mail server terminals SV1 and SV2 to the mail server terminals SV1 and SV2 the proper period, from the mail server terminals SV1 and SV2, each terminal (a client terminal and network facsimile apparatus) receives the electronic mail, and notifies a user of that in the end of a local. However, about network facsimile apparatus, the e-mail address set up in the end of a local is dealt with as the user address in this case.

[0035] Here, as for the protocol which each terminal applies to the mail server terminals SV1 and SV2 for the confirmation of receipt of the electronic mail addressed to a user, the so-called POP (PostOffice Protocol) etc. is applied.

[0036] Moreover, communications protocols, such as TCP/IP, and SMTP, POP, data format, DS of an electronic mail, etc. are prescribed by the RFC (Request For Comments) document published from the organization which is summarizing the technical content about the Internet called IETF (Internet Engineering Task Force), respectively. For example, RFC793 and IP are prescribed by RFC793 and SMTP is prescribed [the format of RFC821 and an electronic mail] for TCP by RFC822, RFC1341, RFC1342, etc., respectively.

[0037] Drawing 2 shows the example of a configuration of network facsimile apparatus (FI1, FI2).

[0038] In this drawing the system control section 1 Control processing of each part of this network facsimile apparatus, It is what performs various control processings, such as predetermined code decode processing and facsimile transmission-control-procedures processing. A system memory 2 When performing the control processing program which the system control section 1 performs, and a processing program, while memorizing various required data etc. Constituting the work area of the system control section 1, the parameter memory 3 is for memorizing various kinds of information peculiar to this network facsimile apparatus, and the clock circuit 4 outputs current time information.

[0039] A scanner 5 is for reading a manuscript image in predetermined resolution, and a plotter 6 is for carrying out the record output of the image in predetermined resolution, the actuation display 7 is for operating this network facsimile apparatus, and it consists of various kinds of actuation keys and various kinds of drops.

[0040] The coding decryption section 8 is for decrypting the drawing information by which coding compression is carried out to the original picture signal, while carrying out coding compression of the picture signal, and image storage equipment 9 is for memorizing much drawing information in the condition that coding compression was carried out.

[0041] The group 3 facsimile modem 10 is for realizing the modem function of group 3 facsimile, and is equipped with the slow-modem function (V. 21 modems) for exchanging a transmission protocol signal, and the fast modem function (V. 17 modems, a V.34 modem, V.29 modem, V.27ter modem, etc.) for mainly exchanging drawing information.

[0042] A network control unit 11 is for connecting this facsimile apparatus to a public network PSTN, and is equipped with the automatic sending-and-receiving function.

[0043] The Local Area Network interface circuitry 12 is for connecting this network facsimile apparatus to a Local Area Network, and the Local Area Network transmission control section 13 is for performing communications control processing of the predetermined protocol suite for exchanging various data among other Data Terminal Equipments through a Local Area Network and the Internet.

[0044] These system control sections 1, a system memory 2, the parameter memory 3, the clock circuit 4, a scanner 5, a plotter 6, the actuation display 7, the coding decryption section 8, image storage equipment 9, the group 3 facsimile modem 10, a network control unit 11, and the Local Area Network transmission control section 13 are connected to the internal bus 14, and the exchange of the data between each of these elements is performed mainly through this internal bus 14.

[0045] Moreover, the exchange of the data between a network control unit 11 and the group 3 facsimile modem 10 is performed directly.

[0046] Now, when the received electronic mail is an electronic mail of a junction transmitting request of a predetermined format, to the destination number arranged at the electronic mail, the network facsimile apparatus FI1 and FI2 carry out call origination using a public network PSTN, and transmit the drawing information arranged at the text of an electronic mail.

[0047] Here, an example of the electronic mail when carrying out the junction transmitting request of the drawing information on the group 3 facsimile apparatus connected to the public network PSTN to the network facsimile apparatus FI1 and FI2 using an electronic mail is shown in drawing 3 (a).

[0048] An electronic mail consists of header information and this information fundamentally, and, fundamentally, the header information consists of the "Subject" field used in order to display "To" field for displaying the "From" field for displaying the "Message-ID" field where the message identification information for discernment of the "Date" field which sets transmitting time information, and an electronic mail is set, and an addresser, and a destination address, the heading of the text, etc.

[0049] However, the name of the directive "RELAY" to which, as for the "Subject" field, this electronic mail expresses the purport which is because it is a junction transmitting request, the telephone number of the junction destination, and the junction destination where it was bundled with the parenthesis is arranged in this case. In addition, although the telephone number of the junction destination arranged in this case is one, the two or more telephone numbers can also be arranged.

[0050] Moreover, although this information on an electronic mail has fundamentally a limit that it must be the legible information on seven bit codes, since it is binary data, the drawing information which it is going to include in the text of an electronic mail in this case cannot be arranged directly. So, in this example, it changes into the information on a MIME (Multipurpose Internet Mail Extensions(multiple-purpose mail); RFC1341, RFC1342) format like a graphic display.

[0051] Namely, the "MIME-Version" field which displays that this information of this is a MIME format on the header information in this case (this value) "1.0" immobilization is added. Moreover, this information The "Content-Transfer-Encoding" field for displaying the coding method of the content (in this case) It consists of MIME information after following [using the "base64" coding method and] a

display, following a base64 coding regulation in drawing information and encoding.

[0052] Therefore, when the network facsimile apparatus which received the electronic mail investigates the value of the "Subject" field of header information and the directive "RELAY" is contained, the drawing information on this information on the received electronic mail is recognized to be an electronic mail for the junction transfer request which carries out a junction transfer to the telephone number contained in the "Subject" field.

[0053] And when it has been recognized as the received electronic mail being a thing for a junction transfer request, the MIME information on this information is changed into the drawing information on original, and the drawing information is transmitted to the specified destination.

[0054] On the other hand, even when the telephone number of the directive "RELAY" arranged in the "Subject" field like drawing 3 (a) and the junction destination and the name of the junction destination were expressed with the plaintext and the electronic mail of junction request transmission is received from other users who do not constitute this communication network, a junction request send action will be performed and a profit will be brought to an unjust user, and it is not desirable.

[0055] So, in this example, as shown in this drawing (b), suppose the telephone number of the junction destination, and the name of the junction destination that the content enciphered by predetermined encryption processing is arranged among the information arranged in the "Subject" field.

[0056] Therefore, in this case, when the network facsimile apparatus which received the electronic mail investigates the value of the "Subject" field of header information and the directive "RELAY" is contained, it is judged that the electronic mail of a junction transmitting request was received.

[0057] And when the original telephone number and the name of the junction destination are formed with the application of predetermined code decode processing and the decode processing is appropriately completed about the remaining information on the "Subject" field, the junction transfer of the drawing information on this information on an electronic mail is carried out at the formed telephone number, and when decode processing is not completed appropriately, it is made not to perform junction transmission.

[0058] Thereby, the unjust junction request send action by the inaccurate user can be controlled.

[0059] Moreover, in this example, while applying the private key cryptosystem enciphered as cipher processing using proper private key information, as shown in drawing 4, the private key table which memorized a user's mail address and private key information is memorized, and decode processing of a code is performed [user / each] with the application of corresponding private key information about each registered user.

[0060] In this case, an example of actuation of the network facsimile apparatus at the time of receiving an electronic mail is shown in drawing 5.

[0061] If an electronic mail is received (the result of decision 101 is YES), the content of the "Subject" field of the electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 102). A directive "RELAY" is not contained, but in not being the electronic mail of a junction transmitting request, in the "Subject" field, the result of the (decision 103 performs processing corresponding to NO) and the electronic mail then received (processing 104), and ends this actuation in it.

[0062] moreover -- the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 103 received YES) and then is registered into the private key table (processing 105), and it is registered -- (-- the private key information into which the result of decision 106 is registered corresponding to YES) and its mail address is taken out.

[0063] And the data of the remaining part of the "Subject" field are taken out (processing 107), decode processing of the predetermined code which applied private key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 108).

[0064] When a destination number and a destination name are appropriately obtained by this decode

processing, facsimile junction transmitting processing (processing 110) in which the drawing information for which the result of the (decision 109 carried out MIME inverse transformation to YES) and the destination number then taken out, and formed this information on an electronic mail in it is transmitted is performed, and a junction send action is performed.

[0065] Moreover, when the result of decision 109 is set to NO by the case where a destination number and a destination name are not able to be appropriately obtained by decode processing when the result of decision 106 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a private key table, at that event, this actuation is ended and a junction send action is not performed.

[0066] Thus, since the private key information beforehand registered into the user was applied in this example, decode processing of the information as which the "Subject" field was enciphered was carried out and the junction destination number and the junction destination name have been acquired. In requesting junction transmission to this network facsimile apparatus, it is good to apply the registered private key information, to encipher the junction destination number and junction destination name which are arranged in the "Subject" field by the predetermined private key cryptosystem, and to arrange the enciphered content as a junction destination number and a junction destination name.

[0067] Thereby, since inaccurate users other than the user registered beforehand cannot make the junction transmission using this network facsimile apparatus perform appropriately, they can control an inaccurate junction send action and can manage a communication network smoothly.

[0068] In addition, in the example mentioned above, although he is trying to register private key information to each user, about each network facsimile apparatus, one private key information is set up, and other users apply the private key information, and can do cipher processing by the predetermined private key cryptosystem.

[0069] By the way, a cipher system has the so-called public key cryptosystem which applies key information which is a code [which was mentioned above], and decode side, is a code and decode side and is different besides the private key cryptosystem using the same private key as everyone knows. At this public key cryptosystem, by the code side, information is enciphered with the application of private key information, and the information on the original plaintext is acquired from the information enciphered with the application of public key information by the decode side.

[0070] When applying this public key cryptosystem, as shown in drawing 6, it is good to be made to perform actuation as memorized the public key table which memorized a user's mail address and its public key information and shown in drawing 7 at this example.

[0071] That is, if an electronic mail is received in this case (the result of decision 201 is YES), the content of the "Subject" field of that electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 202). A directive "RELAY" is not contained, but in not being the electronic mail of a junction transmitting request, in the "Subject" field, the result of the (decision 203 performs processing corresponding to NO) and the electronic mail then received (processing 204), and ends this actuation in it.

[0072] moreover -- the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 203 received YES) and then is registered into the public key table (processing 205), and it is registered -- (-- the public key information into which the result of decision 206 is registered corresponding to YES) and its mail address is taken out.

[0073] And the data of the remaining part of the "Subject" field are taken out (processing 207), decode processing of the predetermined code which applied public key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 208).

[0074] When a destination number and a destination name are appropriately obtained by this decode processing, facsimile junction transmitting processing (processing 210) in which the drawing information for which the result of the (decision 209 carried out MIME inverse transformation to YES)

and the destination number then taken out, and formed this information on an electronic mail in it is transmitted is performed, and a junction send action is performed.

[0075] Moreover, when the result of decision 209 is set to NO by the case where a destination number and a destination name are not able to be appropriately obtained by decode processing when the result of decision 206 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a public key table, at that event, this actuation is ended and a junction send action is not performed.

[0076] Thus, since the public key information beforehand registered into the user was applied in this example, decode processing of the information as which the "Subject" field was enciphered was carried out and the junction destination number and the junction destination name have been acquired. In requesting junction transmission to this network facsimile apparatus A user is good to apply predetermined private key information, to encipher the junction destination number and junction destination name which are arranged in the "Subject" field by the predetermined public key cryptosystem, and to arrange the enciphered content as a junction destination number and a junction destination name.

[0077] Thereby, since inaccurate users other than the user registered beforehand cannot make the junction transmission using this network facsimile apparatus perform appropriately, they can control an inaccurate junction send action and can manage a communication network smoothly.

[0078] In addition, one key information common to all users with natural, since the information on the original plaintext is acquired from the information which enciphered the information on a plaintext with the application of private key information in the code side, and was enciphered with the application of public key information in the decode side, as mentioned above in this public key cryptosystem is applied, and since the enciphered information cannot be decoded, a public key table which was mentioned above becomes indispensable.

[0079] By the way, although it has judged that a transmitting agency user's public key information is suitable in the example mentioned above when decode processing of the enciphered information is completed appropriately. For example, it is assumed that junction request transmission by the inaccurate user will be received and performed by the case where an inaccurate user uses a registered user's mail address unfairly when producing the situation where decode processing is appropriately completed using the key information which the inaccurate user used by chance.

[0080] Then, in order to enable it to avoid this situation, the following addition conditions are set up.

[0081] namely, the case where the information from which decode processing was appropriately completed and was obtained as a result is the format "telephone number corresponding to predetermined telephone number system" "" (" -- "a character string" -- ") -- as long as -- junction transmission of the received electronic mail is performed.

[0082] In this case, an example of actuation of the network facsimile apparatus at the time of receiving an electronic mail is shown in drawing 8.

[0083] If an electronic mail is received (the result of decision 301 is YES), the content of the "Subject" field of the electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 302). A directive "RELAY" is not contained, but in not being the electronic mail of a junction transmitting request, in the "Subject" field, the result of the (decision 303 performs processing corresponding to NO) and the electronic mail then received (processing 304), and ends this actuation in it.

[0084] moreover -- the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 303 received YES) and then is registered into the public key table (processing 305), and it is registered -- (-- the private key information into which the result of decision 306 is registered corresponding to YES) and its mail address is taken out.

[0085] And the data of the remaining part of the "Subject" field are taken out (processing 307), decode processing of the predetermined code which applied public key information about the data is performed,

and an original junction destination number and an original junction destination name are obtained (processing 308).

[0086] When this decode processing is completed appropriately and the result of decision 309 is set to YES, the junction destination number then taken out investigates whether it is in agreement with a predetermined telephone number system (processing 310).

[0087] By the case where the junction destination number then taken out is in agreement with a predetermined telephone number system, when the result of decision 311 is set to YES, call origination is carried out to the junction destination number, facsimile junction transmitting processing (processing 312) in which the drawing information which carried out MIME inverse transformation and formed this information on an electronic mail is transmitted is performed, and a junction send action is performed.

[0088] Moreover, when the result of decision 306 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a private key table, When the result of decision 309 is set to NO by the case where a destination number and a destination name are not able to be appropriately obtained by decode processing, When the result of decision 311 is set to NO by the case where the junction destination number then taken out is not in agreement with a predetermined telephone number system, at that event, this actuation is ended and a junction send action is not performed.

[0089] Drawing 9 shows an example of actuation of the network facsimile apparatus at the time of receiving the electronic mail concerning other examples of this invention.

[0090] If an electronic mail is received (the result of decision 401 is YES), the content of the "Subject" field of the electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 402). A directive "RELAY" is not contained, but in not being the electronic mail of a junction transmitting request, in the "Subject" field, the result of the (decision 403 performs processing corresponding to NO) and the electronic mail then received (processing 404), and ends this actuation in it.

[0091] moreover -- the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 403 received YES) and then is registered into the public key table (processing 405), and it is registered -- (-- the public key information into which the result of decision 406 is registered corresponding to YES) and its mail address is taken out.

[0092] And the data of the remaining part of the "Subject" field are taken out (processing 407), decode processing of the predetermined code which applied public key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 408).

[0093] When this decode processing is completed appropriately and the result of decision 409 is set to YES, the junction destination number then taken out investigates whether it is in agreement with a predetermined telephone number system (processing 410).

[0094] By the case where the junction destination number then taken out is in agreement with a predetermined telephone number system, when the result of decision 411 is set to YES, call origination is carried out to the junction destination number, facsimile junction transmitting processing (processing 412) in which the drawing information which carried out MIME inverse transformation and formed this information on an electronic mail is transmitted is performed, and a junction send action is performed.

[0095] moreover, when the result of decision 406 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a private key table When the result of decision 409 is set to NO by the case where it was not able to save "he has no key" as error information (processing 413), and a destination number and a destination name are not able to be appropriately obtained by decode processing When the result of decision 411 is set to NO by the case where the junction destination number which saved "the decode error" as error information (processing 414), and was then taken out is not in agreement with a predetermined telephone number system As "a telephone number error" is saved as error information (processing 415) and it is shown in drawing 10 , a

purport with access of unjust junction request transmission with the error information The electronic mail of the report of which a manager is notified is created (processing 416), that electronic mail is transmitted to a manager (processing 417), and this actuation is ended. Moreover, a junction send action is not performed in this case.

[0096] Thus, in this example, since the manager is notified of the purport with unjust access with error information, it can know clearly where unjust access was carried out from and in which phase it was judged as the error, and, as for a manager, prevention of unjust access or the advice of the cause of an error to a registered user can perform a maintenance service appropriately.

[0097] In addition, a manager's mail address is registered into network facsimile apparatus in this case.

[0098] Drawing 11 and drawing 12 show an example of actuation of the network facsimile apparatus at the time of receiving an electronic mail concerning the example of further others of this invention.

[0099] If an electronic mail is received (the result of decision 501 is YES), the content of the "Subject" field of the electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 502). A directive "RELAY" is not contained, but in not being the electronic mail of a junction transmitting request, in the "Subject" field, the result of the (decision 503 performs processing corresponding to NO) and the electronic mail then received (processing 504), and ends this actuation in it.

[0100] moreover -- the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 503 received YES) and then is registered into the public key table (processing 505), and it is registered -- (-- the public key information into which the result of decision 506 is registered corresponding to YES) and its mail address is taken out.

[0101] And the data of the remaining part of the "Subject" field are taken out (processing 507), decode processing of the predetermined code which applied public key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 508).

[0102] When this decode processing is completed appropriately and the result of decision 509 is set to YES, the junction destination number then taken out investigates whether it is in agreement with a predetermined telephone number system (processing 510).

[0103] By the case where the junction destination number then taken out is in agreement with a predetermined telephone number system, when the result of decision 511 is set to YES, call origination is carried out to the junction destination number, facsimile junction transmitting processing (processing 512) in which the drawing information which carried out MIME inverse transformation and formed this information on an electronic mail is transmitted is performed, and a junction send action is performed.

[0104] moreover, when the result of decision 506 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a public key table When the result of decision 509 is set to NO by the case where it was not able to save "he has no key" as error information (processing 513), and a destination number and a destination name are not able to be appropriately obtained by decode processing When the result of decision 511 is set to NO by the case where the junction destination number which saved "the decode error" as error information (processing 514), and was then taken out is not in agreement with a predetermined telephone number system "A telephone number error" is saved as error information (processing 515), and as shown in drawing 10, these data of the report which notifies a manager of a purport with access of unjust junction request transmission with the error information are created (processing 516).

[0105] Subsequently, it investigates whether it is set up so that an error report may be notified by E-mail to a manager (decision 517), and by the case where it is set up so that an error report may be notified by E-mail to a manager, when the result of decision 517 is set to YES, the electronic mail which transmits the report created by processing 516 is created (processing 518), and the electronic mail is transmitted to a manager (processing 519).

[0106] By next, the case where it is set up so that it may investigate whether it is set up so that an error

report may be notified by facsimile transmission to a manager (decision 520) and an error report may be notified by facsimile transmission to a manager When the result of decision 520 is set to YES, these data of the report created by processing 516 are changed into the facsimile drawing information that it corresponds (processing 521), call origination is carried out to the manager telephone number registered beforehand, and the facsimile drawing information is transmitted (processing 522).

[0107] Furthermore, it investigates whether it is set up so that the record output of the error report may be carried out (decision 523), and when decision 523 result is set to YES by the case where it is set up so that the record output of the error report may be carried out, it changes to the image data which corresponds these data of the report created by processing 516 (processing 524), and a record output is carried out from a plotter 6 in the image (processing 525).

[0108] To a manager the purport which had unjust access in this example with the content of an error Thus, an electronic mail, facsimile transmission, Since the report image is notified by carrying out a record output, or a manager It can know clearly where unjust access was carried out from and in which phase it was judged as the error, and prevention of unjust access or the advice of the cause of an error to a registered user can perform a maintenance service appropriately. Moreover, since a manager can get an error report with the most convenient means, a manager's time and effort is substantially reducible.

[0109] In addition, a manager's mail address and the facsimile telephone number are beforehand registered into network facsimile apparatus in this case.

[0110] Drawing 13 and drawing 14 show an example of actuation of the network facsimile apparatus at the time of receiving an electronic mail concerning this invention and also other examples.

[0111] If an electronic mail is received (the result of decision 601 is YES), the content of the "Subject" field of the electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 602). A directive "RELAY" is not contained, but in not being the electronic mail of a junction transmitting request, in the "Subject" field, the result of the (decision 603 performs processing corresponding to NO) and the electronic mail then received (processing 604), and ends this actuation in it.

[0112] moreover -- the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 603 received YES) and then is registered into the public key table (processing 605), and it is registered -- (-- the public key information into which the result of decision 606 is registered corresponding to YES) and its mail address is taken out.

[0113] And the data of the remaining part of the "Subject" field are taken out (processing 607), decode processing of the predetermined code which applied public key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 608).

[0114] When this decode processing is completed appropriately and the result of decision 609 is set to YES, the junction destination number then taken out investigates whether it is in agreement with a predetermined telephone number system (processing 610).

[0115] By the case where the junction destination number then taken out is in agreement with a predetermined telephone number system, when the result of decision 611 is set to YES, call origination is carried out to the junction destination number, facsimile junction transmitting processing (processing 612) in which the drawing information which carried out MIME inverse transformation and formed this information on an electronic mail is transmitted is performed, and a junction send action is performed.

[0116] moreover, when the result of decision 606 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a public key table When the result of decision 609 is set to NO by the case where it was not able to save "he has no key" as error information (processing 613), and a destination number and a destination name are not able to be appropriately obtained by decode processing When the result of decision 611 is set to NO by the case where the junction destination number which saved "the decode error" as error information (processing 614), and was then taken out is not in agreement with a predetermined telephone number system "A

telephone number error" is saved as error information (processing 615), and the content of the unlawful access table as shown in drawing 15 is updated based on the mail address of the transmitting agency user at that time (processing 616). Here, an unlawful access table memorizes the count of unlawful access of the unlawful access user showing a user's mail address to which it accessed unlawfully, and its user.

[0117] Subsequently, as shown in drawing 16, these data of the report which notifies a manager of a purport with access of unjust junction request transmission with the error information and the count of unlawful access are created (processing 617).

[0118] Subsequently, it investigates whether it is set up so that an error report may be notified by E-mail to a manager (decision 618), and by the case where it is set up so that an error report may be notified by E-mail to a manager, when the result of decision 618 is set to YES, the electronic mail which transmits the report created by processing 617 is created (processing 619), and the electronic mail is transmitted to a manager (processing 620).

[0119] By next, the case where it is set up so that it may investigate whether it is set up so that an error report may be notified by facsimile transmission to a manager (decision 621) and an error report may be notified by facsimile transmission to a manager When the result of decision 621 is set to YES, these data of the report created by processing 617 are changed into the facsimile drawing information that it corresponds (processing 622), call origination is carried out to the manager telephone number registered beforehand, and the facsimile drawing information is transmitted (processing 623).

[0120] Furthermore, it investigates whether it is set up so that the record output of the error report may be carried out (decision 624), and when the result of decision 624 is set to YES by the case where it is set up so that the record output of the error report may be carried out, it changes to the image data which corresponds these data of the report created by processing 617 (processing 625), and a record output is carried out from a plotter 6 in the image (processing 626).

[0121] To a manager the purport which had unjust access in this example with the content of an error, and the count of unlawful access Thus, an electronic mail, facsimile transmission, Since the report image is notified by carrying out a record output, or a manager It can know clearly where unjust access was carried out how many times from and in which phase it was judged as the error, and prevention of unjust access or the advice of the cause of an error to a registered user can perform a maintenance service appropriately. Moreover, since a manager can get an error report with the most convenient means, a manager's time and effort is substantially reducible.

[0122] In addition, a manager's mail address and the facsimile telephone number are beforehand registered into network facsimile apparatus in this case.

[0123] Two or more network facsimile apparatus are contained in the communication network mentioned above. By the way, with each network facsimile apparatus Although he is trying to output the report showing the purport to which requested junction transmission was not carried out but unlawful access was carried out to a manager while supervising the situation of unlawful access when accessed unlawfully When unlawful access is considered with the whole communication system, it is desirable that each network facsimile apparatus notifies carrier beam unlawful access to other network facsimile apparatus.

[0124] Therefore, when the mail address (network address) of two or more network facsimile apparatus contained in a communication network is first registered into the network facsimile address table as shown in drawing 17, and unlawful access is carried out, it is good to notify that by E-mail to other network facsimile apparatus.

[0125] Drawing 18, drawing 19, and drawing 20 show an example of actuation of the network facsimile apparatus at the time of receiving an electronic mail in this case.

[0126] If an electronic mail is received (the result of decision 701 is YES), the content of the "Subject" field of the electronic mail will be investigated, and the classification of an electronic mail will be judged (processing 702).

[0127] the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the

"From" field of the electronic mail which the result of decision 703 received YES) and then is registered into the public key table (processing 705), and it is registered -- (-- the public key information into which the result of decision 706 is registered corresponding to YES) and its mail address is taken out. [0128] And the data of the remaining part of the "Subject" field are taken out (processing 707), decode processing of the predetermined code which applied public key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 708).

[0129] When this decode processing is completed appropriately and the result of decision 709 is set to YES, the junction destination number then taken out investigates whether it is in agreement with a predetermined telephone number system (processing 710).

[0130] By the case where the junction destination number then taken out is in agreement with a predetermined telephone number system, when the result of decision 711 is set to YES, call origination is carried out to the junction destination number, facsimile junction transmitting processing (processing 712) in which the drawing information which carried out MIME inverse transformation and formed this information on an electronic mail is transmitted is performed, and a junction send action is performed.

[0131] moreover, when the result of decision 706 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a private key table When the result of decision 709 is set to NO by the case where it was not able to save "he has no key" as error information (processing 713), and a destination number and a destination name are not able to be appropriately obtained by decode processing "A decode error" is saved as error information (processing 714), and when the result of decision 711 is set to NO by the case where the junction destination number then taken out is not in agreement with a predetermined telephone number system, "a telephone number error" is saved as error information (processing 715).

[0132] Subsequently, based on the mail address of the transmitting agency user at that time, the electronic mail which notifies an unlawful access user as shows drawing 21 is created (processing 716). Here, to these data, a directive "[illegal user]" and an unlawful access user's mail address are arranged at the electronic mail which notifies this unlawful access user at the "Subject" field including "ERROR REPORT." Therefore, if an electronic mail is received and "ERROR REPORT" is arranged in the "Subject" field, it can be judged that it is for the electronic mail to notify an unlawful access user.

[0133] And the created electronic mail is transmitted to all the mail addresses registered into the network facsimile address table (processing 717), and, subsequently the content of the same unlawful access table as **** is updated based on the mail address of the transmitting agency user at that time (processing 718).

[0134] Next, these data of the report which notifies a manager of a purport with access of unjust junction request transmission with the error information and the count of unlawful access like **** are created (processing 719).

[0135] Subsequently, it investigates whether it is set up so that an error report may be notified by E-mail to a manager (decision 720), and by the case where it is set up so that an error report may be notified by E-mail to a manager, when the result of decision 718 is set to YES, the electronic mail which transmits the report created by processing 717 is created (processing 721), and the electronic mail is transmitted to a manager (processing 722).

[0136] By next, the case where it is set up so that it may investigate whether it is set up so that an error report may be notified by facsimile transmission to a manager (decision 723) and an error report may be notified by facsimile transmission to a manager When the result of decision 723 is set to YES, these data of the report created by processing 719 are changed into the facsimile drawing information that it corresponds (processing 724), call origination is carried out to the manager telephone number registered beforehand, and the facsimile drawing information is transmitted (processing 725).

[0137] Furthermore, it investigates whether it is set up so that the record output of the error report may be carried out (decision 726), and when the result of decision 726 is set to YES by the case where it is set up so that the record output of the error report may be carried out, it changes to the image data which corresponds these data of the report created by processing 719 (processing 727), and a record output is

carried out from a plotter 6 in the image (processing 728).

[0138] Moreover, a directive "RELAY" is not contained in the "Subject" field, but in not being the electronic mail of a junction transmitting request, the result of the (decision 703 investigates whether "ERROR REPORT" is arranged in the "Subject" field of NO) and the received electronic mail (decision 730).

[0139] By the case where "ERROR REPORT" is arranged in the "Subject" field of the received electronic mail, when the result of decision 730 is set to YES, an unlawful access user's mail address is taken out from the text of the received electronic mail (processing 731), the unlawful access table mentioned above by that mail address is updated, and this actuation is ended. Moreover, when the result of decision 730 is set to NO, processing corresponding to the electronic mail then received is performed (processing 733), and this actuation is ended.

[0140] By the way, although he is trying to memorize the user address and the count of unlawful access in the example mentioned above about the user who performed unjust access, all the electronic mails further received from the user which the count of unlawful access has become more than constant value can perform the reception control of an electronic mail so that it may discard.

[0141] An example of actuation of the network facsimile apparatus at the time of receiving an electronic mail in this case of [in this case] is shown in drawing 22 , drawing 23 , and drawing 24 .

[0142] If an electronic mail is received (the result of decision 801 is YES), the user address set to the "From" field of an electronic mail will be first registered into the unlawful access table, and it will investigate whether you are the inaccurate user which the count of unlawful access has become beyond the predetermined value (for example, 5) (decision 802). By the case where the user address set to the "From" field of an electronic mail belongs to an inaccurate user, when the result of decision 802 is set to YES, the advice mail of unlawful access mentioned above is created, it transmits to other network facsimile apparatus (processing 803), the content of the unlawful access table is updated with the user address of the transmitting agency user at that time (processing 804), and this actuation is ended.

[0143] Moreover, by the case where the user address set to the "From" field of an electronic mail does not belong to an inaccurate user, when the result of decision 802 is set to NO, the content of the "Subject" field of the electronic mail is investigated, and the classification of an electronic mail is judged (processing 805).

[0144] the case where the directive "RELAY" is contained in the "Subject" field and it is the electronic mail of a junction transmitting request -- (-- the case where investigate whether the mail address of the "From" field of the electronic mail which the result of decision 806 received YES) and then is registered into the public key table (processing 807), and it is registered -- (-- the public key information into which the result of decision 808 is registered corresponding to YES) and its mail address is taken out.

[0145] And the data of the remaining part of the "Subject" field are taken out (processing 809), decode processing of the predetermined code which applied public key information about the data is performed, and an original junction destination number and an original junction destination name are obtained (processing 810).

[0146] When this decode processing is completed appropriately and the result of decision 811 is set to YES, the junction destination number then taken out investigates whether it is in agreement with a predetermined telephone number system (processing 812).

[0147] By the case where the junction destination number then taken out is in agreement with a predetermined telephone number system, when the result of decision 813 is set to YES, call origination is carried out to the junction destination number, facsimile junction transmitting processing (processing 815) in which the drawing information which carried out MIME inverse transformation and formed this information on an electronic mail is transmitted is performed, and a junction send action is performed.

[0148] moreover, when the result of decision 808 is set to NO by the case where the mail address of the "From" field of an electronic mail which received then is not registered into a private key table When the result of decision 811 is set to NO by the case where it was not able to save "he has no key" as error information (processing 816), and a destination number and a destination name are not able to be appropriately obtained by decode processing "A decode error" is saved as error information (processing

817), and when the result of decision 813 is set to NO by the case where the junction destination number then taken out is not in agreement with a predetermined telephone number system, "a telephone number error" is saved as error information (processing 818).

[0149] Subsequently, based on the mail address of the transmitting agency user at that time, the electronic mail which notifies the same unlawful access user as **** is created (processing 820).

[0150] And the created electronic mail is transmitted to all the mail addresses registered into the network facsimile address table (processing 821), and, subsequently the content of the same unlawful access table as **** is updated based on the mail address of the transmitting agency user at that time (processing 822).

[0151] Next, these data of the report which notifies a manager of a purport with access of unjust junction request transmission with the error information and the count of unlawful access like **** are created (processing 823).

[0152] Subsequently, it investigates whether it is set up so that an error report may be notified by E-mail to a manager (decision 824), and by the case where it is set up so that an error report may be notified by E-mail to a manager, when the result of decision 824 is set to YES, the electronic mail which transmits the report created by processing 823 is created (processing 825), and the electronic mail is transmitted to a manager (processing 826).

[0153] By next, the case where it is set up so that it may investigate whether it is set up so that an error report may be notified by facsimile transmission to a manager (decision 827) and an error report may be notified by facsimile transmission to a manager When the result of decision 827 is set to YES, these data of the report created by processing 823 are changed into the facsimile drawing information that it corresponds (processing 828), call origination is carried out to the manager telephone number registered beforehand, and the facsimile drawing information is transmitted (processing 829).

[0154] Furthermore, it investigates whether it is set up so that the record output of the error report may be carried out (decision 830), and when the result of decision 830 is set to YES by the case where it is set up so that the record output of the error report may be carried out, it changes to the image data which corresponds these data of the report created by processing 823 (processing 831), and a record output is carried out from a plotter 6 in the image (processing 832).

[0155] Moreover, a directive "RELAY" is not contained in the "Subject" field, but in not being the electronic mail of a junction transmitting request, the result of the (decision 806 investigates whether "ERROR REPORT" is arranged in the "Subject" field of NO) and the received electronic mail (decision 835).

[0156] By the case where "ERROR REPORT" is arranged in the "Subject" field of the received electronic mail, when the result of decision 836 is set to YES, an unlawful access user's mail address is taken out from the text of the received electronic mail (processing 837), the unlawful access table mentioned above by that mail address is updated, and this actuation is ended. Moreover, when the result of decision 836 is set to NO, processing corresponding to the electronic mail then received is performed (processing 838), and this actuation is ended.

[0157] In addition, although he is trying to register mail address and count of unlawful access of the user who accessed unlawfully on the unlawful access table in the example mentioned above, the content of this information to register is not restricted to this. For example, in case a user's mail address and access time of day at which it accessed unlawfully are saved as unlawful access hysteresis information and the advice report of unlawful access is created, counting of the count of registration of the same mail address is carried out, and the enumerated data can be used as a count of unlawful access.

[0158]

[Effect of the Invention] Since according to this invention the private key information or public key information beforehand registered into the user was applied, decode processing of the enciphered information was carried out and junction destination information etc. has been acquired as explained above Inaccurate users other than the user registered beforehand Since the junction transmission using this network facsimile apparatus cannot be made to perform appropriately, an inaccurate junction send action can be controlled and the effectiveness that a communication network can be smoothly managed

now is acquired.

[0159] moreover, decode processing of the enciphered information was completed appropriately, and the obtained destination telephone number agreed for the predetermined telephone number system -- the telephone number -- **** -- the case where it is -- as long as -- since junction transmission of the received electronic mail is performed, an inaccurate junction send action can be controlled and the effectiveness that a communication network can be smoothly managed now is acquired.

[0160] Moreover, since the manager is notified of the purport with unjust access with error information using an electronic mail, facsimile communication, or the hard copy of a report, a manager can know clearly where unjust access was carried out from and in which phase it was judged as the error, and acquires the effectiveness that prevention of unjust access or the advice of the cause of an error to a registered user can perform a maintenance service appropriately.

[0161] To a manager a purport with unjust access with the content of an error, and the count of unlawful access Moreover, an electronic mail, facsimile transmission, Since the report image is notified by carrying out a record output, or a manager It can know clearly where unjust access was carried out how many times from and in which phase it was judged as the error, and prevention of unjust access or the advice of the cause of an error to a registered user can perform a maintenance service appropriately. Moreover, since a manager can get an error report with the most convenient means, the effectiveness that a manager's time and effort is substantially reducible is also acquired.

[0162] Moreover, since the end of a local notifies carrier beam unlawful access to other network facsimile apparatus among two or more network facsimile apparatus contained in a communication network system, when the inaccurate user is delivering the same attack to separate network facsimile apparatus, the effectiveness that this inaccurate user can be eliminated appropriately is acquired.

[0163] Moreover, since all the electronic mails received from the user which the count of unlawful access has become more than constant value are performing the reception control of an electronic mail so that it may discard, they acquire the effectiveness that an inaccurate user's access can be eliminated appropriately.

[Translation done.]

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram having shown the communication system concerning one example of this invention.

[Drawing 2] The block diagram having shown the example of a configuration of network facsimile apparatus.

[Drawing 3] The schematic diagram having shown an example of the electronic mail when carrying out a junction transmitting request.

[Drawing 4] The schematic diagram having shown an example of a private key table.

[Drawing 5] The flow chart which showed an example of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 6] The schematic diagram having shown an example of a public key table.

[Drawing 7] The flow chart which showed other examples of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 8] The flow chart which showed the example of further others of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 9] The flow chart which showed actuation of the network facsimile apparatus at the time of receiving an electronic mail, and also other examples.

[Drawing 10] The schematic diagram having shown an example of the electronic mail of the report which notifies a manager of a purport with access of unjust junction request transmission with the error information.

[Drawing 11] The flow chart which showed a part of another example of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 12] The flow chart which showed the remaining part of another example of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 13] The flow chart which showed a part of still more nearly another example of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 14] The flow chart which showed the remaining part of still more nearly another example of actuation of the network facsimile apparatus at the time of receiving an electronic mail.

[Drawing 15] The schematic diagram having shown an example of an unlawful access table.

[Drawing 16] The schematic diagram having shown an example of the electronic mail of the report which notifies a manager of a purport with access of unjust junction request transmission with the error information and the count of unlawful access.

[Drawing 17] The schematic diagram having shown an example of a network facsimile address table.

[Drawing 18] The flow chart which showed a part of actuation of the network facsimile apparatus at the time of receiving an electronic mail, and also another example.

[Drawing 19] The flow chart which showed other parts of actuation of the network facsimile apparatus at the time of receiving an electronic mail, and also another example.

[Drawing 20] The flow chart which showed the remaining parts of actuation of the network facsimile

apparatus at the time of receiving an electronic mail, and also another example.

[Drawing 21] The schematic diagram having shown an example of the electronic mail which notifies an unlawful access user.

[Drawing 22] The flow chart which showed a part of actuation of the network facsimile apparatus at the time of receiving an electronic mail, and also another example.

[Drawing 23] The flow chart which showed other parts of actuation of the network facsimile apparatus at the time of receiving an electronic mail, and also another example.

[Drawing 24] The flow chart which showed the remaining parts of actuation of the network facsimile apparatus at the time of receiving an electronic mail, and also another example.

[Translation done.]

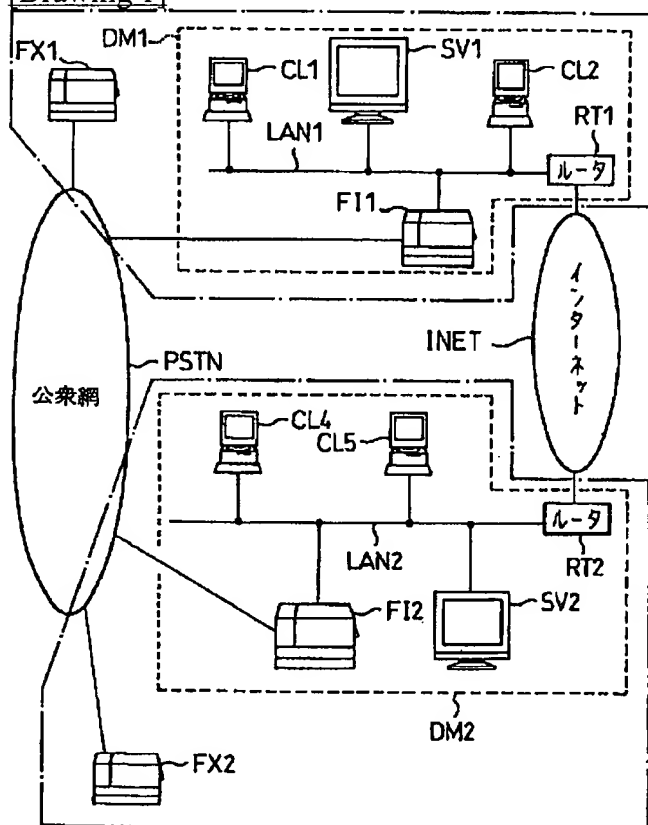
* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

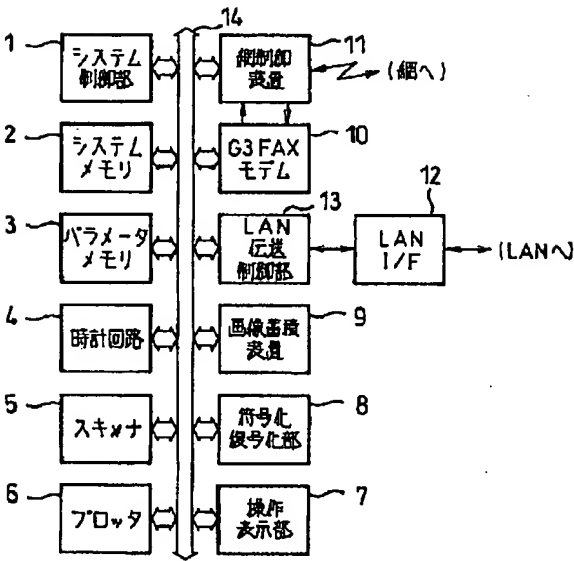
- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DRAWINGS

[Drawing 1]



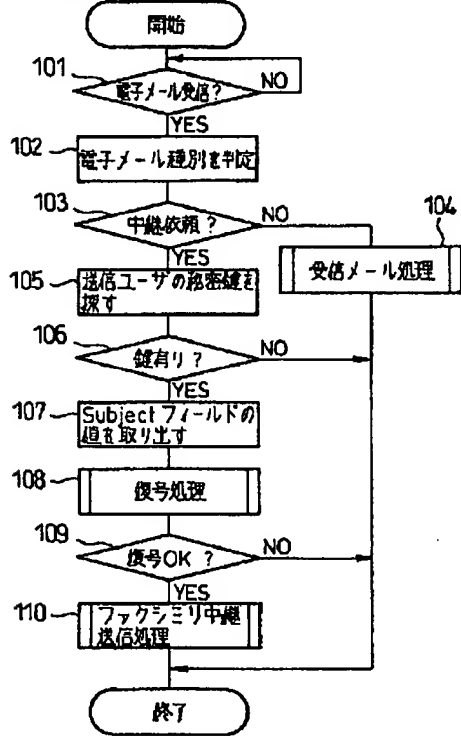
[Drawing 2]



[Drawing 4]

メールアドレス	秘密鍵情報
user1@***.co.jp	秘密鍵 # 1
user2@***.co.jp	秘密鍵 # 2
user3@***.co.jp	秘密鍵 # 3
...	...

[Drawing 5]



[Drawing 6]

メールアドレス	公開鍵情報
user1@***.co.jp	公開鍵 # 1
user2@***.co.jp	公開鍵 # 2
user3@***.co.jp	公開鍵 # 3
.

[Drawing 3]

(a)

Date: Tue, 18 Feb 1997 15:45:21 +0900
Message-ID: <XXXXXXXXXXXXXXXX@***.co.jp>
From: user1@***.co.jp
To: NETFAX@***.co.jp
Subject: RELAY: 0123-4567-7901(Any-company)
Mime-Version: 1.0
Content-Transfer-Encoding: base64
Status: R

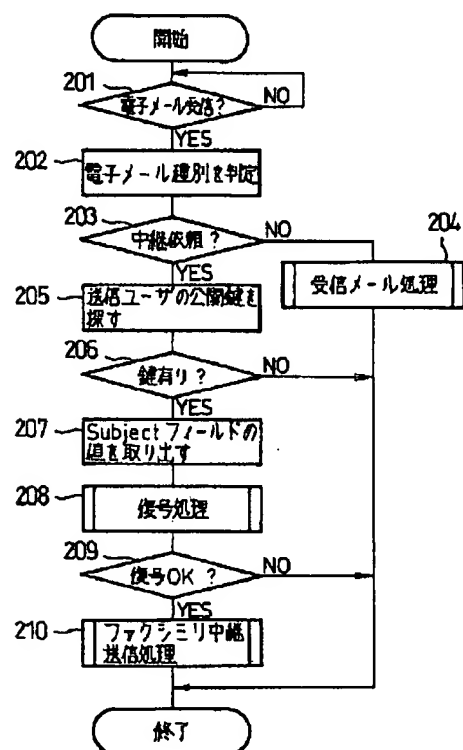
OM8R4KGxGuEAAAAAAAAAAAAAAAAAAAAAAOwADAP7/CQAGAAAAAA
AAAAAAAAABAAAAAQAAAAAAAAAAEAAAagAAAAEAAAD+////AAAAAA
AAD////////////////////////////////////

(b)

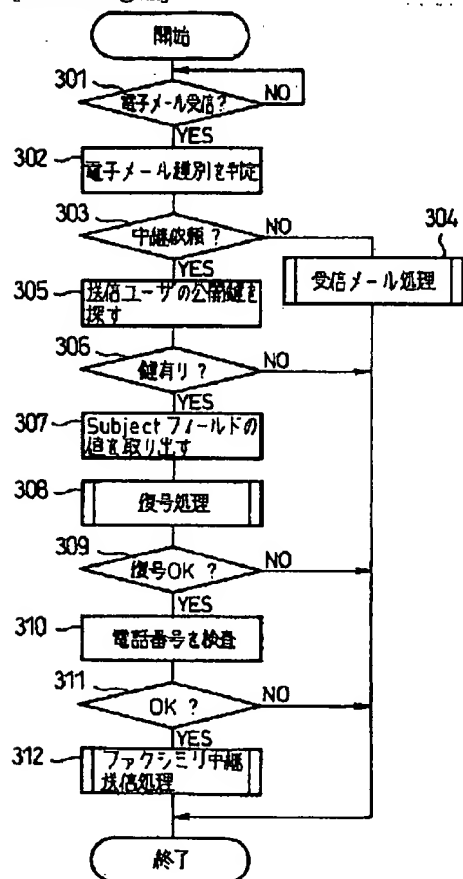
Date: Tue, 18 Feb 1997 15:45:21 +0900
Message-ID: <XXXXXXXXXXXXXXXX@***.co.jp>
From: user1@***.co.jp
To: NETFAX@***.co.jp
Subject: RELAY: Fg0eDZoNCg5ODT4NwgluBZYNG1uB8lJKiquCvYKigsa
Mime-Version: 1.0
Content-Transfer-Encoding: base64
Status: R

OM8R4KGxGuEAAAAAAAAAAAAAAAAAAAAAAOwADAP7/CQAGAAAAAA
AAAAAAAAABAAAAAQAAAAAAAAAAEAAAagAAAAEAAAD+////AAAAAA
AAD////////////////////////////////////

[Drawing 7]



[Drawing 8]



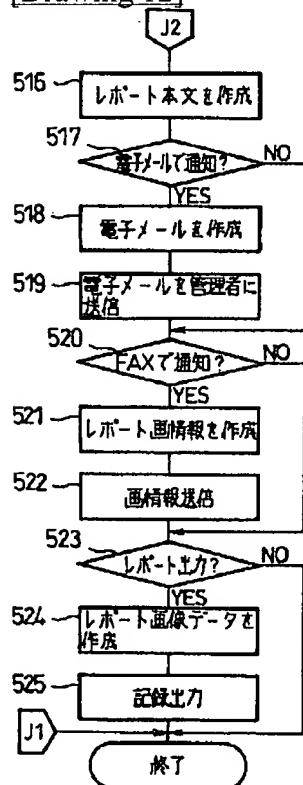
[Drawing 10]

Date: Tue, 18 Feb 1997 16:42:02 +0900
 Message-ID: <YYYYYYYYYYYYY@***.co.jp>
 From: NETFAX@***.co.jp
 To: fax_admin @***.co.jp
 Subject: ERROR REPORT
 Mime-Version: 1.0
 Content-Type: text/plain; charset="ISO-2022-JP"
 Content-Transfer-Encoding: 7bit

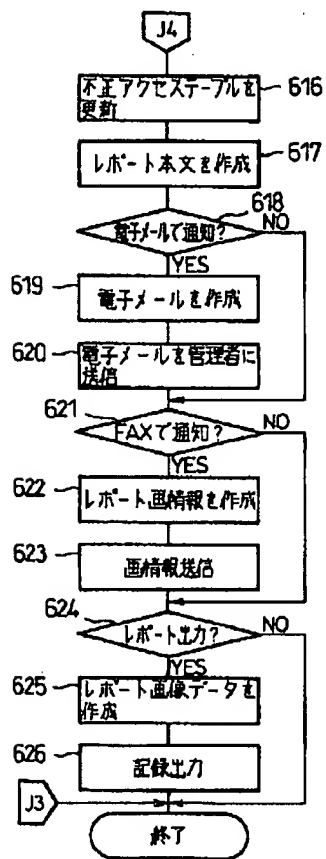
<< 不正アクセス通知 #003 >>

1997年2月18日15時20分33秒 に
 user99@****.co.jp から中継依頼がありました、
 user99@****.co.jp の公開鍵はテーブルにありませんでした。

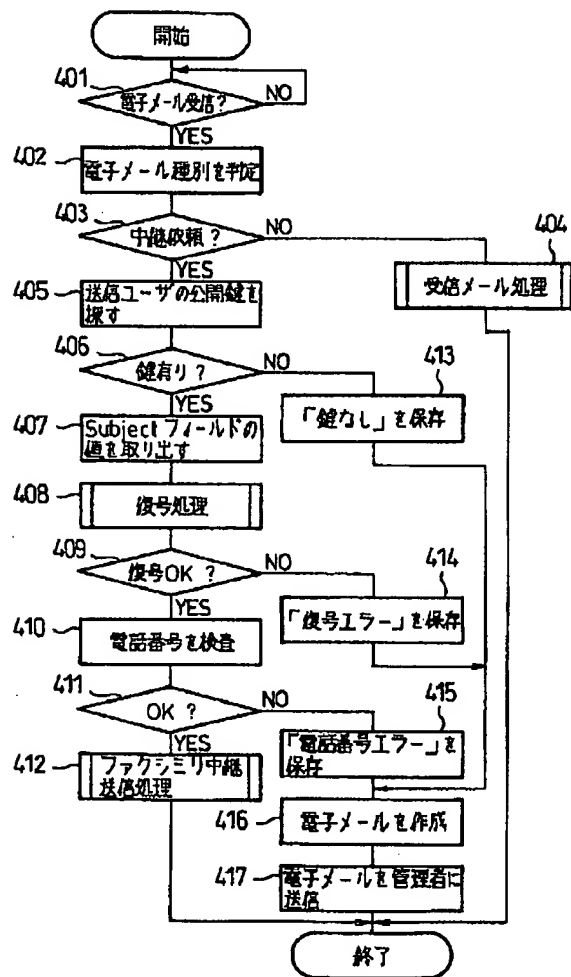
[Drawing 12]



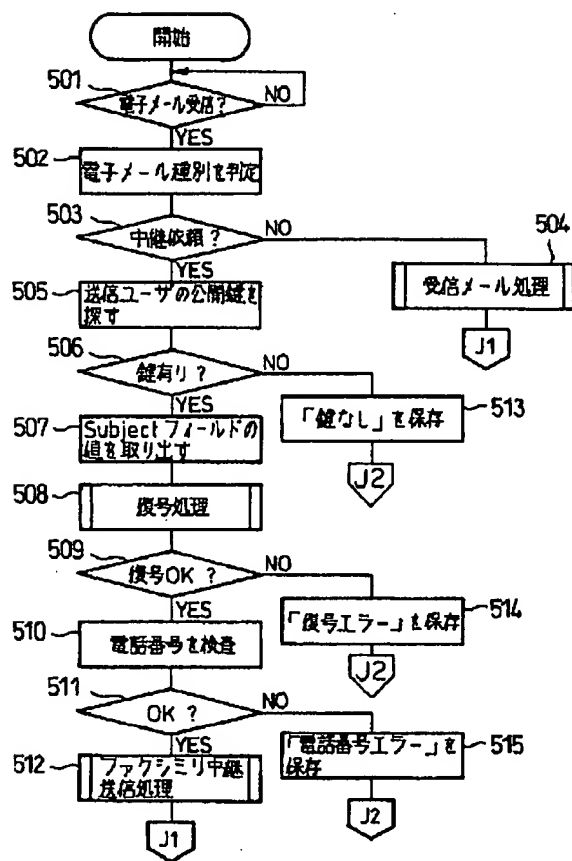
[Drawing 14]



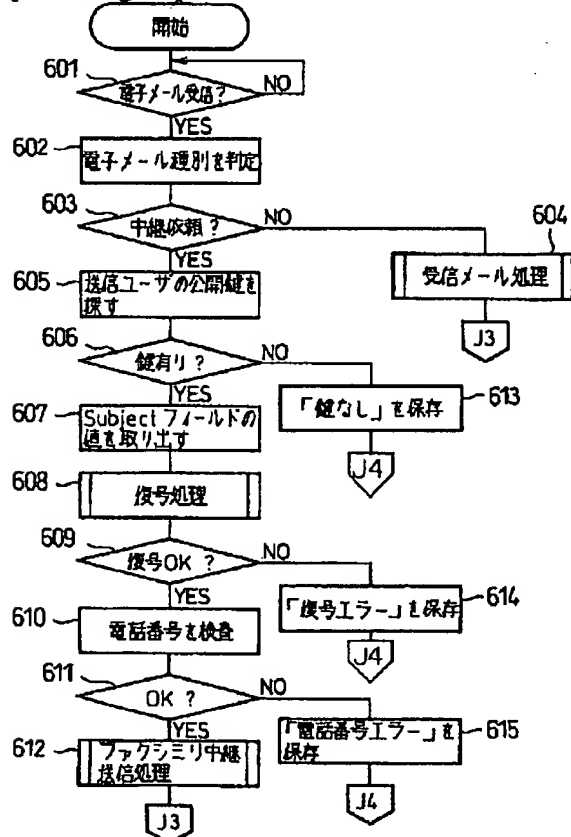
[Drawing 9]



[Drawing 11]



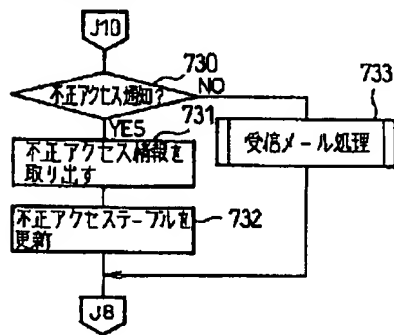
[Drawing 13]



[Drawing 17]

NETFAX-a@***.co.jp
NETFAX-b@***.co.jp
NETFAX-c@***.co.jp
NETFAX-d@***.co.jp
...

[Drawing 20]



[Drawing 15]

不正アクセスユーザ#1	不正アクセス回数#1
不正アクセスユーザ#2	不正アクセス回数#2
不正アクセスユーザ#3	不正アクセス回数#3
不正アクセスユーザ#4	不正アクセス回数#4
...	...

[Drawing 16]

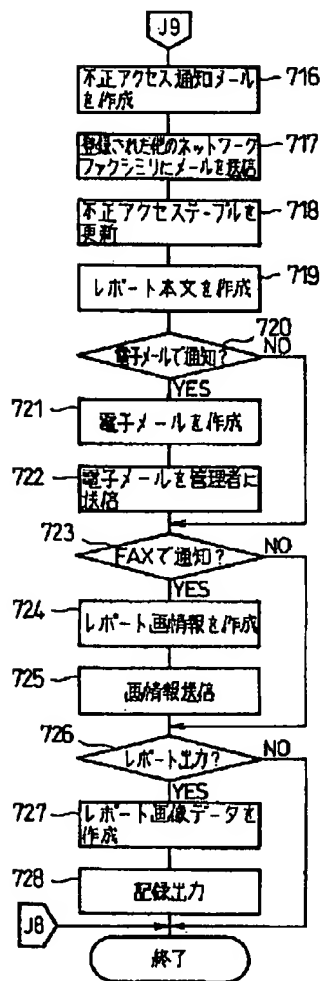
Date: Tue, 18 Feb 1997 16:42:02 +0900
Message-ID: <YYYYYYYYYYYY@***.co.jp>
From: NETFAX@***.co.jp
To: fax_admin @***.co.jp
Subject: ERROR REPORT
Mime-Version: 1.0
Content-Type: text/plain; charset="ISO-2022-JP"
Content-Transfer-Encoding: 7bit

<< 不正アクセス通知 #003 >>

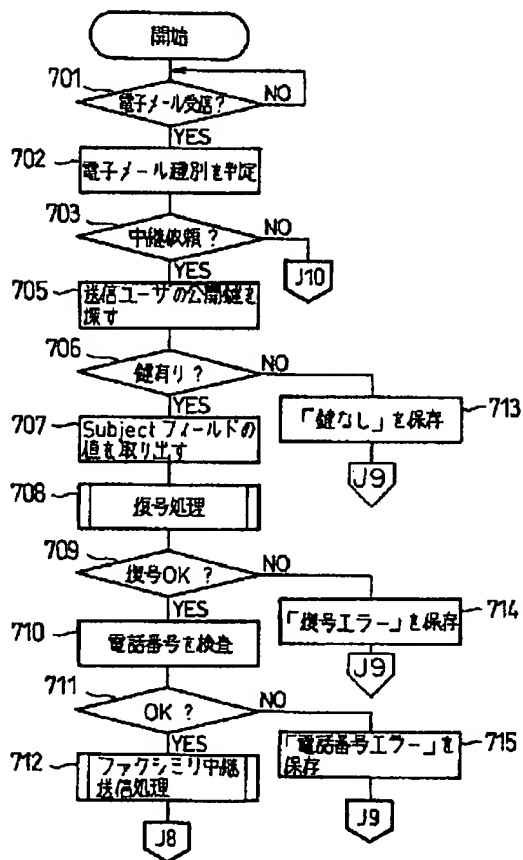
1997年2月18日15時20分33秒 に
user99@***.co.jp から中継依頼がありましたが、
user99@***.co.jp の公開鍵はテーブルにありませんでした。

user99@***.co.jp の不正アクセスは、
1997年1月1日 以来 2回目です。

[Drawing 19]



[Drawing 18]

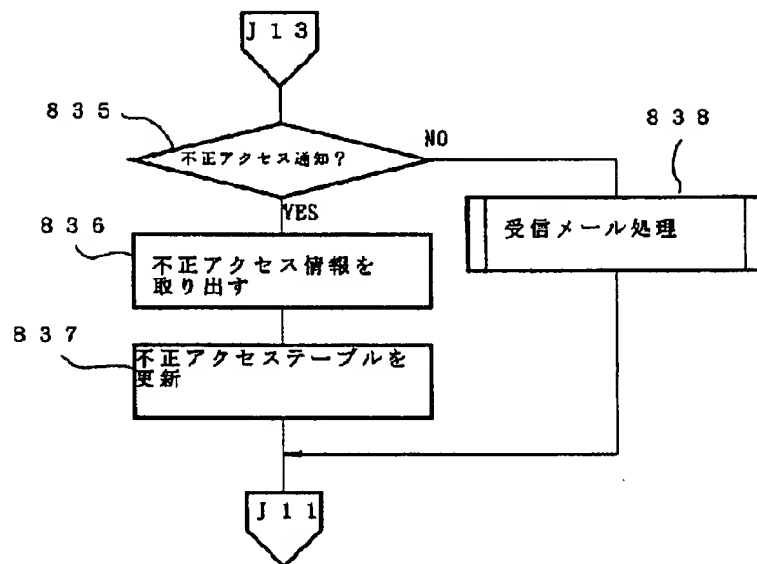


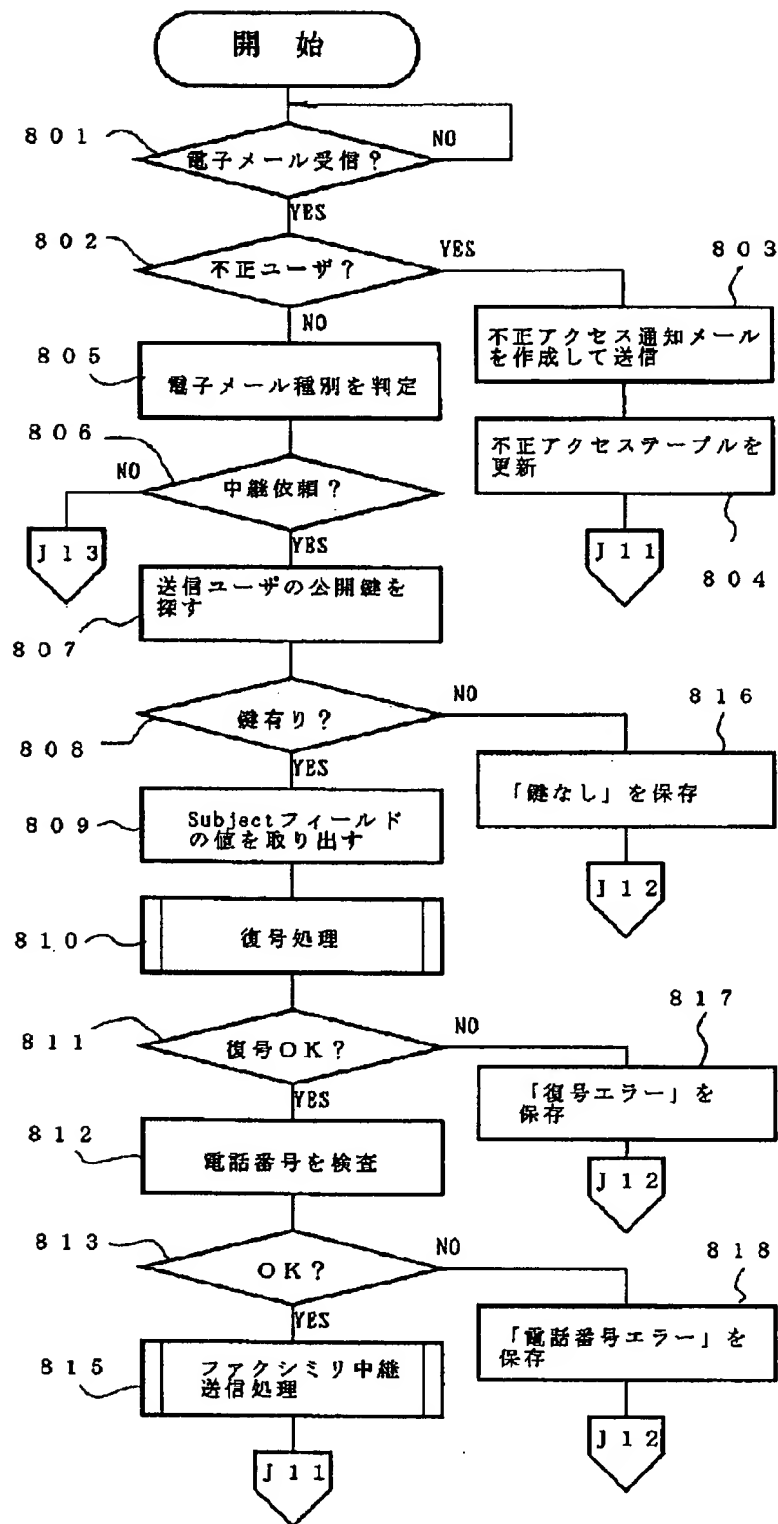
[Drawing 21]

Date: Tue, 18 Feb 1997 16:42:02 +0900
 Message-ID: <YYYYYYYYYYYYY@***.co.jp>
 From: NETFAX@***.co.jp
 To: NETFAX-b@***.co.jp, NETFAX-c@***.co.jp, NETFAX-d@***.co.jp
 Subject: ERROR REPORT

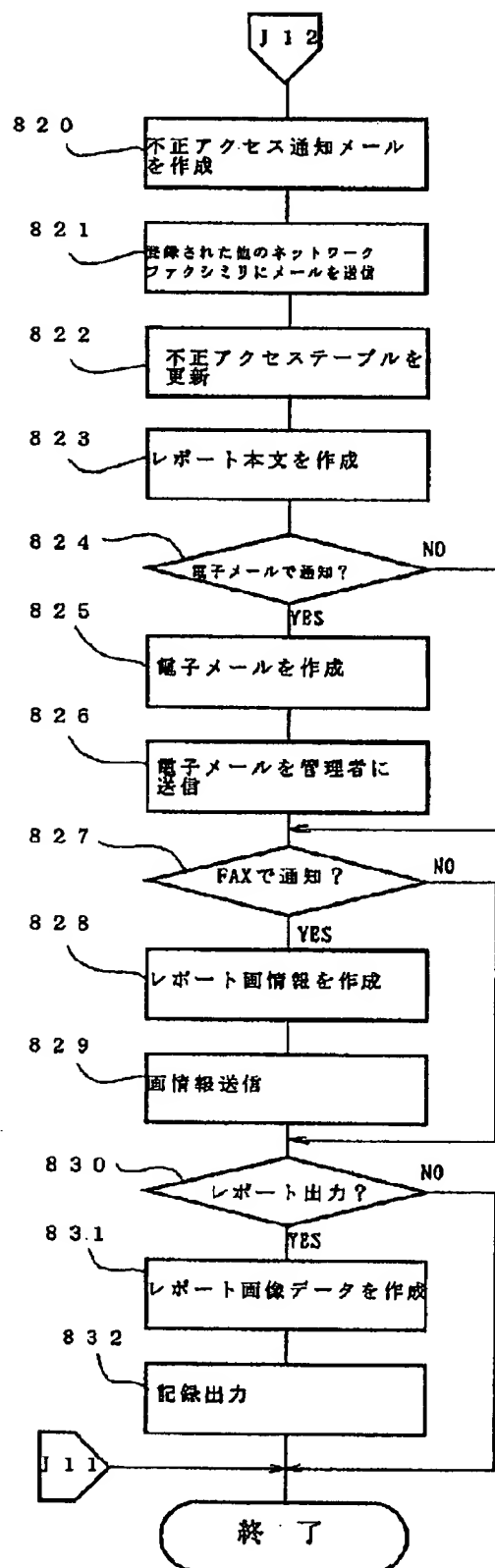
 [illegal user] :user99@***.co.jp

[Drawing 24]

[Drawing 22]



[Drawing 23]



[Translation done.]